

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTALDB1623

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

|              |    |                 |  |
|--------------|----|-----------------|--|
| NEWS         | 1  |                 | Web Page for STN Seminar Schedule - N. America   |
| NEWS         | 2  | JUL 02          | LMEDLINE coverage updated  |
| NEWS         | 3  | JUL 02          | SCISEARCH enhanced with complete author names  |
| NEWS         | 4  | JUL 02          | CHEMCATS accession numbers revised   |
| NEWS         | 5  | JUL 02          | CA/CAPplus enhanced with utility model patents from China  |
| NEWS         | 6  | JUL 16          | CAPplus enhanced with French and German abstracts  |
| NEWS         | 7  | JUL 18          | CA/CAPplus patent coverage enhanced  |
| NEWS         | 8  | JUL 26          | USPATFULL/USPAT2 enhanced with IPC reclassification  |
| NEWS         | 9  | JUL 30          | USGENE now available on STN  |
| NEWS         | 10 | AUG 06          | CAS REGISTRY enhanced with new experimental property tags  |
| NEWS         | 11 | AUG 06          | FSTA enhanced with new thesaurus edition   |
| NEWS         | 12 | AUG 13          | CA/CAPplus enhanced with additional kind codes for granted patents   |
| NEWS         | 13 | AUG 20          | CA/CAPplus enhanced with CAS indexing in pre-1907 records  |
| NEWS         | 14 | AUG 27          | Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB   |
| NEWS         | 15 | AUG 27          | USPATOLD now available on STN  |
| NEWS         | 16 | AUG 28          | CAS REGISTRY enhanced with additional experimental spectral property data  |
| NEWS         | 17 | SEP 07          | STN AnaVist, Version 2.0, now available with Derwent World Patents Index   |
| NEWS         | 18 | SEP 13          | FORIS renamed to SOFIS   |
| NEWS         | 19 | SEP 13          | INPADOCDB enhanced with monthly SDI frequency  |
| NEWS         | 20 | SEP 17          | CA/CAPplus enhanced with printed CA page images from 1967-1998   |
| NEWS         | 21 | SEP 17          | CAPplus coverage extended to include traditional medicine patents  |
| NEWS         | 22 | SEP 24          | EMBASE, EMBAL, and LEMBASE reloaded with enhancements  |
| NEWS         | 23 | OCT 02          | CA/CAPplus enhanced with pre-1907 records from Chemisches Zentralblatt   |
| NEWS         | 24 | OCT 19          | BEILSTEIN updated with new compounds   |
| NEWS         | 25 | NOV 15          | Derwent Indian patent publication number format enhanced   |
| NEWS EXPRESS | 19 | SEPTEMBER 2007: | CURRENT WINDOWS VERSION IS V8.2,<br>CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),<br>AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007. |
| NEWS HOURS   |    |                 | STN Operating Hours Plus Help Desk Availability  |
| NEWS LOGIN   |    |                 | Welcome Banner and News Items  |
| NEWS IPC8    |    |                 | For general information regarding STN implementation of IPC 8  |

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 16:17:17 ON 15 NOV 2007

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST  | 0.21             | 0.21          |

FILE 'CAPLUS' ENTERED AT 16:17:37 ON 15 NOV 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Nov 2007 VOL 147 ISS 21

FILE LAST UPDATED: 14 Nov 2007 (20071114/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> e inalco/paco

'PACO' IS NOT A VALID EXPAND FIELD CODE FOR FILE 'CAPLUS'

The indicated field code is not available for EXPAND in this file. To see a list of valid EXPAND field codes, enter HELP SFIELDS at an arrow prompt (=>).

=> e inalco/pa

|    |        |   |
|----|--------|---|
| E1 | 2      | INAKEN/PA                                 |
| E2 | 7      | INAKI/PA                                  |
| E3 | 15 --> | INALCO/PA                                 |
| E4 | 15     | INALCO S P A/PA                           |
| E5 | 15     | INALCO S P A ITALY/PA                     |
| E6 | 1      | INALDO/PA                                 |
| E7 | 1      | INALDO CAMARA FERREIRA DE PAULA/PA        |
| E8 | 1      | INALDO CAMARA FERREIRA DE PAULA BRAZIL/PA |

E9 3 INALET/PA  
 E10 1 INALFA/PA  
 E11 1 INALFA INDUSTRIES B V/PA  
 E12 1 INALFA INDUSTRIES B V NETH/PA

=> s e3-e5

15 INALCO/PA  
 15 "INALCO S P A"/PA  
 15 "INALCO S P A ITALY"/PA  
 L1 15 (INALCO/PA OR "INALCO S P A"/PA OR "INALCO S P A ITALY"/PA)

=> d l1 1-15 ibib abs

L1 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:429422 CAPLUS

DOCUMENT NUMBER: 142:463961

TITLE: Process for the preparation of 1-chloro-3,5-di-O-acyl-2-deoxy-L-ribofuranoside derivatives from 2-deoxy-D-galactose via stereoselective chlorination reaction

INVENTOR(S): Tamerlani, Giancarlo; Bartalucci, Debora; Salsini, Liana; Rapaccini, Silvia

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

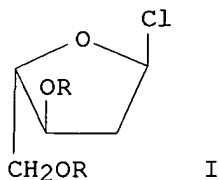
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE                                   | APPLICATION NO.  | DATE       |
|---|------|--|------------------|------------|
| WO 2005044832   | A1   | 20050519                               | WO 2004-EP52900  | 20041110   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |  |                  |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |  |                  |            |
| CA 2545437  | A1   | 20050519                               | CA 2004-2545437  | 20041110   |
| EP 1699805  | A1   | 20060913                               | EP 2004-818161   | 20041110   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS   |      |  |                  |            |
| CN 1878782  | A    | 20061213                               | CN 2004-80033026 | 20041110   |
| JP 2007510696   | T    | 20070426                               | JP 2006-538856   | 20041110   |
| US 2007083041   | A1   | 20070412                               | US 2006-578800   | 20060509   |
| PRIORITY APPLN. INFO.:  |      |  | IT 2003-FI288    | A 20031110 |
|   |      |  | WO 2004-EP52900  | W 20041110 |
| OTHER SOURCE(S):  |      | CASREACT 142:463961; MARPAT 142:463961 |                  |            |
| GI  |      |  |                  |            |



AB Herein described is a process for the preparation of 1-chloro-3,5-di-O-acyl-2-deoxy-L-ribofuranoside derivs. I, wherein R is acyl, useful as intermediates in processes for preparing nucleotides of the L series having antiviral activity. Thus, 1-chloro-3,5-di-O-p-chloro-benzoyl-deoxy-L-ribofuranoside was prepared from 2-deoxy-D-galactose via stereoselective chlorination reaction.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:394996 CAPLUS

DOCUMENT NUMBER: 142:429239

TITLE: Process for the preparation of galactose from milk or whey with Lactobacillaceae.

INVENTOR(S): Cipolletti, Giovanni; Manoni, Marco; Vagnoli, Luana; Giacomelli, Silvia; Biagiolini, Silvia; Pratesi, Cristina; Camici, Lucia

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 12 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2005039299   | A2   | 20050506 | WO 2004-EP52709 | 20041028   |
| WO 2005039299   | A3   | 20050623 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| CA 2543862  | A1   | 20050506 | CA 2004-2543862 | 20041028   |
| EP 1716242  | A2   | 20061102 | EP 2004-804506  | 20041028   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK   |      |          |                 |            |
| JP 2007515156   | T    | 20070614 | JP 2006-537306  | 20041028   |
| US 2007134373   | A1   | 20070614 | US 2006-577847  | 20060427   |
| PRIORITY APPLN. INFO.:  |      |          |                 |            |
|   |      |          | IT 2003-FI275   | A 20031029 |
|   |      |          | WO 2004-EP52709 | W 20041028 |

AB A process for the preparation of high purity galactose is described, comprising the inoculum, of milk or milk serum not previously subjected to any type of preliminary treatment and/or purification procedure and not containing any bactericides or bacteriostats, with nonmodified microorganisms commonly used in the dairy industry.

L1 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:141119 CAPLUS

DOCUMENT NUMBER: 142:225629

TITLE: Sulfated glycosaminoglycans derived from N-acetylheparosan with high antithrombotic activity in plasma

INVENTOR(S): Manoni, Marco; Salsini, Liana; Chini, Jacopo; Cipolletti, Giovanni

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2005014656   | A1   | 20050217 | WO 2004-EP51391  | 20040707   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |            |
| AU 2004262584   | A1   | 20050217 | AU 2004-262584   | 20040707   |
| CA 2534709  | A1   | 20050217 | CA 2004-2534709  | 20040707   |
| EP 1654288  | A1   | 20060510 | EP 2004-766148   | 20040707   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR   |      |          |                  |            |
| CN 1832966  | A    | 20060913 | CN 2004-80022307 | 20040707   |
| BR 2004013346   | A    | 20061010 | BR 2004-13346    | 20040707   |
| JP 2007501305   | T    | 20070125 | JP 2006-522341   | 20040707   |
| US 2007042993   | A1   | 20070222 | US 2005-557584   | 20051115   |
| MX 2006PA01511  | A    | 20060515 | MX 2006-PA1511   | 20060207   |
| IN 2006CN00772  | A    | 20070622 | IN 2006-CN772    | 20060303   |
| PRIORITY APPLN. INFO.:  |      |          | IT 2003-MI1618   | A 20030806 |
|   |      |          | WO 2004-EP51391  | W 20040707 |

AB The present invention relates to a process for the preparation of sulfated glycosaminoglycans derived from N-acetylheparosan which comprises: a) N-deacetylation and N-sulfation of the N-acetylheparosan polysaccharide prepared from natural or recombinant bacterial strain, preferably K5 E. coli, b) enzymic epimerization with the glucuronyl C5-epimerase enzyme, c) partial O-sulfation followed by a partial O-desulfation, d) partial 6-O-sulfation, e) N-sulfation and an intermediate step of controlled depolymn. characterized by the fact that both O-sulfations (O-sulfation

and 60-sulfation) are partial. Furthermore the invention relates to the products obtained according to the process which show a ratio between the anti-Xa activity and anti-IIa activity equal to or higher than 1 and to compns. comprising said products in combination with suitable and pharmaceutically acceptable excipients and/or diluent.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:652670 CAPLUS

DOCUMENT NUMBER: 141:157383

TITLE: Process for the preparation of ribofuranose derivatives from 2-C-methyl-D-ribose-1,4-lactone via regioselective benzylation and borohydride reduction as synthons for nucleotides

INVENTOR(S): Tamerlani, Giancarlo; Salsini, Liana; Lombardi, Ilaria; Bartalucci, Debora; Cipolletti, Giovanni

PATENT ASSIGNEE(S): Inalco S.P.A., Italy

SOURCE: U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

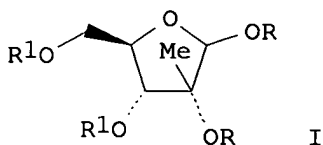
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.                        | DATE       |
|---|------|----------|--|------------|
| US 2004158059   | A1   | 20040812 | US 2003-447167                         | 20030527   |
| US 6891036  | B2   | 20050510 |  |            |
| WO 2004069851   | A1   | 20040819 | WO 2004-EP1151                         | 20040209   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI<br>RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |      |          |  |            |
| EP 1631573  | A1   | 20060308 | EP 2004-709221                         | 20040209   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK   |      |          |  |            |
| CN 1747961  | A    | 20060315 | CN 2004-80003778                       | 20040209   |
| PRIORITY APPLN. INFO.:  |      |          | IT 2003-FI33                           | A 20030210 |
|   |      |          | WO 2004-EP1151                         | W 20040209 |
| OTHER SOURCE(S):  |      |          | CASREACT 141:157383; MARPAT 141:157383 |            |
| GI  |      |          |  |            |



AB The present invention relates to a new process in 3 steps of

regioselective acylation of 2-C-methyl-D-ribose-1,4-lactone, borohydride reduction, and anomeric acylation for the preparation of tetra-acyl ribofuranose derivs. I, wherein R and R1 are independently acyl groups chosen between C1-C6 alkanoyl and C7-C13 aroyl groups, useful as synthons in synthesis of nucleotides. Thus, regioselective benzoylation of 2-C-methyl-D-ribose-1,4-lactone with benzoyl chloride gave 3,5-di-O-benzoyl-2-C-methyl-D-ribose-1,4-lactone in 70 % yield. Reduction of 3,5-di-O-benzoyl-2-C-methyl-D-ribose-1,4-lactone with NaBH4 gave 3,5-di-O-benzoyl-2-C-methyl-D-ribofuranose in 75 % yield. Benzoylation of 3,5-di-O-benzoyl-2-C-methyl-D-ribofuranose gave title 1,2,3,5-tetra-O-benzoyl-2-C-methyl-D-ribofuranose in 70% yield.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:991164 CAPLUS

DOCUMENT NUMBER: 140:23239

TITLE: O-Sulfated bacterial polysaccharides and their use

INVENTOR(S): Manoni, Marco; Miletto, Sandro; Cipolletti, Giovanni; Abbate, Rosanna; Gori, Maria Anna

PATENT ASSIGNEE(S): Inalco S.P.A., Italy

SOURCE: U.S. Pat. Appl. Publ., 17 pp., nones

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE        |
|---|------|----------|-----------------|-------------|
| US 2003232785   | A1   | 20031218 | US 2003-347992  | 20030121    |
| US 6900311  | B2   | 20050531 |                 |             |
| IT 2002MI1294   | A1   | 20031212 | IT 2002-MI1294  | 20020612    |
| CA 2489293  | A1   | 20031224 | CA 2003-2489293 | 20030612    |
| WO 2003106503   | A1   | 20031224 | WO 2003-EP6164  | 20030612    |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |             |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |             |
| AU 2003242681   | A1   | 20031231 | AU 2003-242681  | 20030612    |
| EP 1521778  | A1   | 20050413 | EP 2003-759939  | 20030612    |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |          |                 |             |
| US 2005234014   | A1   | 20051020 | US 2005-131636  | 20050517    |
| PRIORITY APPLN. INFO.:  |      |          | IT 2002-MI1294  | A 20020612  |
|   |      |          | US 2003-347992  | A1 20030121 |
|   |      |          | WO 2003-EP6164  | W 20030612  |

AB The present invention refers to the preparation of O-sulfated, N-sulfated or N-acetylated derivs., both epimerized or non epimerized, of K5, K4, and optionally defructosylated K4 and K40 polysaccharides from Escherichia coli and to their use as antiinflammatory agents in chronic and acute

inflammations. These compds., and in particular O-sulfated, N-acetylated K5 (K5-OSNAc) and O-sulfated, N-sulfated epimerized K5 (K5OSNS epi) obtained according to the present invention show a specific activity on the main cytokines involved in the inflammatory processes inhibiting especially the production of Tumor necrosis factor alpha, interleukin 1 beta and interleukin 6.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:730838 CAPLUS

DOCUMENT NUMBER: 135:267246

TITLE: Glycosaminoglycans derived from the k5 polysaccharide having high anticoagulant and antithrombotic activity and process for their preparation

INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE        |
|---|------|----------|-----------------|-------------|
| WO 2001072848   | A1   | 20011004 | WO 2001-EP3461  | 20010327    |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW |      |          |                 |             |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |             |
| IT 2000MI0665   | A1   | 20011001 | IT 2000-MI665   | 20000330    |
| IT 1318432  | B1   | 20030825 |                 |             |
| CA 2404478  | A1   | 20011004 | CA 2001-2404478 | 20010327    |
| EP 1268559  | A1   | 20030102 | EP 2001-919396  | 20010327    |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |             |
| JP 2003528945   | T    | 20030930 | JP 2001-571779  | 20010327    |
| RU 2283319  | C2   | 20060910 | RU 2002-129018  | 20010327    |
| US 2004146994   | A1   | 20040729 | US 2002-240606  | 20021221    |
| US 2006281152   | A1   | 20061214 | US 2006-440749  | 20060524    |
| PRIORITY APPLN. INFO.:  |      |          | IT 2000-MI665   | A 20000330  |
|   |      |          | WO 2001-EP3461  | W 20010327  |
|   |      |          | US 2002-240606  | A1 20021221 |

AB Glycosaminoglycans derived from the K5 polysaccharide having high anticoagulant and antithrombotic activity obtained by a process comprising the preparation of the K5 polysaccharide from Escherichia coli, N-deacetylation/N-sulfation, C-5 epimerization, supersulfation, selective O-desulfation, selective 6-O sulfation and N-sulfation, wherein said epimerization is carried out using the glucuronosyl C-5 epimerase enzyme in solution or in immobilized form in presence of specific divalent cations.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:31672 CAPLUS

DOCUMENT NUMBER: 134:85171

TITLE: Process for the preparation of the polysaccharides k4 and k5 from Escherichia coli

INVENTOR(S): Petrucci, Franco; Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2001002597          | A1   | 20010111 | WO 2000-EP6122  | 20000630   |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| IT 99MI1465            | A1   | 20010102 | IT 1999-MI1465  | 19990702   |
| PRIORITY APPLN. INFO.: |  |          | IT 1999-MI1465  | A 19990702 |

AB A process is provided for the preparation of the polysaccharides K4 and K5 by fermentation of Escherichia coli on a medium composed of defatted soya flour, mineral salts and glucose, or of the dialyzed portion of yeast autolyzate, mineral salts and glucose. Following fermentation, the polysaccharides were purified from fermentation broth by a process which included centrifugation, ultrafiltration, ethanol precipitation, diafiltration and ion exchange chromatog.

Thus, 820 mg/L of K5 and 420 mg/L of K4 were obtained from batch fermns. on a defatted soya flour medium.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:641009 CAPLUS

DOCUMENT NUMBER: 131:243537

TITLE: Indole derivatives suitable to be used as chromogenic compounds

INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni; Tamerlani, Giancarlo

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 9950438  | A2   | 19991007 | WO 1999-EP2174  | 19990330   |
| WO 9950438  | A3   | 19991125 |                 |            |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| IT 1298965  | B1   | 20000207 | IT 1998-MI664   | 19980330   |
| AU 9936024  | A    | 19991018 | AU 1999-36024   | 19990330   |
| PRIORITY APPLN. INFO.:  |      |          | IT 1998-MI664   | A 19980330 |
|   |      |          | WO 1999-EP2174  | W 19990330 |

AB The present invention refers to indole derivs. suitable to be used as chromogenic compds. in free form or in complexed form with cyclodextrins or with cyclodextrin derivs., usable in the diagnostic, microbiol., mol.-biol. field and similar ones. Thus, 6-bromo-3-indolyl- $\beta$ -D-glucuronide cyclohexyl ammonium salt was prepared and its chromogenic property of the inclusion complex with  $\beta$ -cyclodextrin are reported.

L1 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:709086 CAPLUS

DOCUMENT NUMBER: 129:290371

TITLE: Manufacture of lactulose syrup by isomerization of lactose

INVENTOR(S): Carobbi, Renato; Bimbi, Giuseppe; Cipolletti, Giovanni

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 9847908  | A1   | 19981029 | WO 1998-EP2245  | 19980417 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| CA 2286985  | A1   | 19981029 | CA 1998-2286985 | 19980417 |
| CA 2286985  | C    | 20070327 |                 |          |
| AU 9875266  | A    | 19981113 | AU 1998-75266   | 19980417 |
| EP 975646   | A1   | 20000202 | EP 1998-922729  | 19980417 |
| EP 975646   | B1   | 20030806 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE, SI, FI   |      |          |                 |          |

|                        |    |          |                |            |
|------------------------|----|----------|----------------|------------|
| JP 2002513413          | T  | 20020508 | JP 1998-544979 | 19980417   |
| AT 246699              | T  | 20030815 | AT 1998-922729 | 19980417   |
| US 6214124             | B1 | 20010410 | US 1999-402768 | 19991011   |
| PRIORITY APPLN. INFO.: |    |          | IT 1997-MI889  | A 19970417 |
|                        |    |          | WO 1998-EP2245 | W 19980417 |

AB Lactose is isomerized to lactulose by contacting an aqueous solution or suspension of lactose with Na aluminate and neutralizing the resulting mixture with gaseous CO<sub>2</sub> under pressure to produce a suspension of aluminum hydroxide which is easily separated from the lactulose solution by filtration. The solid is converted with NaHCO<sub>3</sub> to Na aluminate and calcined at 750° to give reconverted Na aluminate. The mother liquor is deionized by passing through an ion exchanger, concentrated at 40° and reduced pressure and cooled to 8-10° for 120-125 h to crystallize residual lactose which is separated by centrifugation to give a title syrup.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:672593 CAPLUS

DOCUMENT NUMBER: 129:261971

TITLE: Glycosaminoglycans having high antithrombotic activity

INVENTOR(S): Casu, Benito; Naggi, Annamaria; Torri, Giangiacomo

PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| -----   | ---- | -----    | -----           | -----      |
| WO 9842754  | A2   | 19981001 | WO 1998-EP1714  | 19980324   |
| WO 9842754  | A3   | 19981223 |                 |            |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| CA 2285383  | A1   | 19981001 | CA 1998-2285383 | 19980324   |
| CA 2285383  | C    | 20060926 |                 |            |
| AU 9870405  | A    | 19981020 | AU 1998-70405   | 19980324   |
| EP 970130   | A2   | 20000112 | EP 1998-917065  | 19980324   |
| EP 970130   | B1   | 20020710 |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI   |      |          |                 |            |
| JP 2001518133   | T    | 20011009 | JP 1998-544883  | 19980324   |
| AT 220410   | T    | 20020715 | AT 1998-917065  | 19980324   |
| ES 2180161  | T3   | 20030201 | ES 1998-917065  | 19980324   |
| US 6197943  | B1   | 20010306 | US 1999-381451  | 19990920   |
| PRIORITY APPLN. INFO.:  |      |          | IT 1997-MI678   | A 19970324 |
|   |      |          | WO 1998-EP1714  | W 19980324 |

AB Glycosaminoglycans having high antithrombotic activity in vitro, are obtained by various kinds of glycosaminoglycans supersulfated by the preparation of the salt of an organic base of the starting supersulfated

glycosaminoglycan, by partial solvolytic desulfation of said salt and N-resulfation of said partially desulfated product.

L1 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:550445 CAPLUS  
DOCUMENT NUMBER: 129:177144  
TITLE: O-Sulfated bacterial polysaccharides  
INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni  
PATENT ASSIGNEE(S): Inalco S.p.A., Italy  
SOURCE: PCT Int. Appl., 20 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND   | DATE   | APPLICATION NO. | DATE       |
|---|--|--|-----------------|------------|
| -----   | ----   | -----  | -----           | -----      |
| WO 9834958  | A1   | 19980813   | WO 1998-EP598   | 19980204   |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW |  |  |                 |            |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  |  |  |                 |            |
| CA 2279317  | A1   | 19980813   | CA 1998-2279317 | 19980204   |
| CA 2279317  | C  | 20060926   |                 |            |
| AU 9863943  | A  | 19980826   | AU 1998-63943   | 19980204   |
| AU 723168   | B2   | 20000817   |                 |            |
| EP 958307   | A1   | 19991124   | EP 1998-909387  | 19980204   |
| EP 958307   | B1   | 20020102   |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI   |  |  |                 |            |
| NZ 337399   | A  | 20000128   | NZ 1998-337399  | 19980204   |
| JP 2001510502   | T  | 20010731   | JP 1998-533750  | 19980204   |
| AT 211488   | T  | 20020115   | AT 1998-909387  | 19980204   |
| PT 958307   | T  | 20020628   | PT 1998-909387  | 19980204   |
| ES 2169503  | T3   | 20020701   | ES 1998-909387  | 19980204   |
| US 6288044  | B1   | 20010911   | US 1999-355211  | 19990723   |
| PRIORITY APPLN. INFO.:  |  |  | IT 1997-MI252   | A 19970207 |
|   |  |  | WO 1998-EP598   | W 19980204 |
| AB  | A process is disclosed for the preparation of O-sulfated K4, K5 and K40 polysaccharides useful for the treatment of tumoral, HIV-1 and coagulation pathologies and in cosmetic prepns., wherein the K4, K5 or K40 polysaccharide in the form of sodium salt is suspended in an aprotic solvent and directly submitted to the reaction of O-sulfation with a pyridine-sulfur trioxide or trimethylamine-sulfur trioxide adduct or with chlorosulfonic acid. |  |                 |            |
| REFERENCE COUNT:  | 3  | THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |                 |            |

L1 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:757036 CAPLUS  
DOCUMENT NUMBER: 128:39636

TITLE: Derivatives of K5 polysaccharide having high anticoagulant activity  
 INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni  
 PATENT ASSIGNEE(S): Inalco S.P.A., Italy  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 9743317  | A1   | 19971120 | WO 1997-EP2379  | 19970509   |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU |      |          |                 |            |
| RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| CA 2253833  | A1   | 19971120 | CA 1997-2253833 | 19970509   |
| CA 2253833  | C    | 20060627 |                 |            |
| AU 9730265  | A    | 19971205 | AU 1997-30265   | 19970509   |
| EP 897393   | A1   | 19990224 | EP 1997-924941  | 19970509   |
| EP 897393   | B1   | 20011205 |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI   |      |          |                 |            |
| AT 210154   | T    | 20011215 | AT 1997-924941  | 19970509   |
| ES 2167748  | T3   | 20020516 | ES 1997-924941  | 19970509   |
| US 6162797  | A    | 20001219 | US 1998-180406  | 19981106   |
| PRIORITY APPLN. INFO.:  |      |          | IT 1996-MI956   | A 19960510 |
|   |      |          | WO 1997-EP2379  | W 19970509 |
| AB Derivs. of the K5 polysaccharide having high anticoagulant activity obtained by a process comprising the N-deacetylation of the K5 polysaccharide followed by N-sulfation, epimerization, O-sulfation and N-resulfation.   |      |          |                 |            |

L1 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1996:464356 CAPLUS  
 DOCUMENT NUMBER: 125:115073  
 TITLE: Process for the preparation of iduronic acid-containing polysaccharides as anticoagulants and antithrombotics  
 INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni  
 PATENT ASSIGNEE(S): Inalco S.P.A., Italy  
 SOURCE: PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| WO 9614425 | A1   | 19960517 | WO 1995-EP4241  | 19951030 |

W: AL, AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN  
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

|            |    |          |                 |          |
|------------|----|----------|-----------------|----------|
| CA 2204366 | A1 | 19960517 | CA 1995-2204366 | 19951030 |
| AU 9539261 | A  | 19960531 | AU 1995-39261   | 19951030 |
| EP 789777  | A1 | 19970820 | EP 1995-937026  | 19951030 |
| EP 789777  | B1 | 20000809 |                 |          |

R: AT, CH, DE, DK, ES, FR, GB, IE, IT, LI, NL, PT, SE

|             |    |          |                |          |
|-------------|----|----------|----------------|----------|
| CN 1162339  | A  | 19971015 | CN 1995-196040 | 19951030 |
| CN 1094977  | B  | 20021127 |                |          |
| JP 10508204 | T  | 19980818 | JP 1996-515019 | 19951030 |
| JP 3640259  | B2 | 20050420 |                |          |
| AT 195348   | T  | 20000815 | AT 1995-937026 | 19951030 |
| ES 2150589  | T3 | 20001201 | ES 1995-937026 | 19951030 |
| PT 789777   | T  | 20010131 | PT 1995-937026 | 19951030 |
| US 5958899  | A  | 19990928 | US 1996-628690 | 19960412 |

PRIORITY APPLN. INFO.: IT 1994-MI2240 A 19941104  
 WO 1995-EP4241 W 19951030

AB Process for the preparation of polysaccharides having a high iduronic acid content comprising: (a) N-deacetylation of the polysaccharide K5 from Escherichia coli or of the heparan sulfate or O-desulfation of heparin or heparan sulfate; (b) N-sulfation of the product obtained from the stage (a); (c) epimerization in presence of the C5 epimerase enzyme; (d) sulfation of at least some free hydroxy groups, wherein the stage (c) is carried out in a reaction medium constituted by a classical buffer solution formed by HEPES, potassium chloride, EDTA and TRITON X-100 to which a suitable additive is added.

L1 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:459466 CAPLUS  
 DOCUMENT NUMBER: 122:197077  
 TITLE: Process for the preparation of crystalline lactulose from commercial syrups  
 INVENTOR(S): Bimbi, Giuseppe  
 PATENT ASSIGNEE(S): Inalco S.p.A., Italy  
 SOURCE: Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| -----   | ---- | -----    | -----           | -----    |
| EP 622374   | A1   | 19941102 | EP 1994-106188  | 19940421 |
| EP 622374   | B1   | 19971203 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE |      |          |                 |          |
| US 5480491  | A    | 19960102 | US 1994-229559  | 19940418 |
| AT 160781   | T    | 19971215 | AT 1994-106188  | 19940421 |
| CA 2121954  | A1   | 19941029 | CA 1994-2121954 | 19940422 |
| CA 2121954  | C    | 20040622 |                 |          |
| JP 06319600   | A    | 19941122 | JP 1994-88434   | 19940426 |
| JP 3589357  | B2   | 20041117 |                 |          |

PRIORITY APPLN. INFO.: IT 1993-MI833 A 19930428

AB A process for preparation of crystalline lactulose with  $\geq 98.5\%$  purity is based on evaporation of com. lactulose aqueous syrups at 50-60° and at a pressure of 2660-6650 Pa to a sugar concentration of 70-80 Brix, cooling to 5-20°, and adding crystalline lactulose trihydrate (5-30 parts) as a crystallization initiator. The com. lactulose syrups have the following composition:  
50-70% by weight of lactulose, 3-9% by weight of lactose, 3-14% by weight of galactose, and 4-7% by weight of other carbohydrates.

L1 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1991:473896 CAPLUS  
DOCUMENT NUMBER: 115:73896  
TITLE: Boron resins as highly selective absorbents for purification of lactulose  
INVENTOR(S): Carobbi, Renato; Innocenti, Franco  
PATENT ASSIGNEE(S): Inalco S.p.A., Italy  
SOURCE: U.S., 7 pp. Cont.-in-part of U.S. 4,937,295.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE        |
|------------------------|------|----------|-----------------|-------------|
| -----                  | ---- | -----    | -----           | -----       |
| US 5002613             | A    | 19910326 | US 1990-527886  | 19900524    |
| US 4937295             | A    | 19900626 | US 1988-171436  | 19880321    |
| PRIORITY APPLN. INFO.: |      |          | IT 1987-19966   | A 19870403  |
|                        |      |          | US 1988-171436  | A2 19880321 |

AB The resins YZ1N(R1)(R2)Z2CH(OH)CH2Z3C6H4B(OH)2 [Y = acrylic polymer; R1, R2 =alkyl; X = OH, halogen; Z1 = (CH2)0-5; Z2 = (CH2)1-5; Z3 = O, S, imino] are useful in lactulose (I) purification Thus, a crosslinked polymer of 50 g Me acrylate and 2 g 1,4-divinylbenzene was condensed with dimethylethylenediamine, epichlorohydrin, and then with m-aminobenzenboronic acid to give a resin showing good absorption selectivity for I in chromatog. purification of sugar mixts.

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

|  |            |         |
|--|------------|---------|
| COST IN U.S. DOLLARS                       | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| FULL ESTIMATED COST                        | 50.36      | 50.57   |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| CA SUBSCRIBER PRICE                        | -11.70     | -11.70  |

STN INTERNATIONAL LOGOFF AT 16:20:11 ON 15 NOV 2007